

WHAT IS CLAIMED IS:

1 1. A controller for monitoring usage status of trunk lines
2 associated with a switch, said switch capable of handling call
3 connections between calling devices and called devices on a
4 plurality of trunk lines associated with said switch, said
5 controller comprising N call application nodes capable of executing
6 a plurality of trunk idle list server applications that allocate
7 ones of said trunk lines to said call connections, wherein a first
8 trunk idle list server application is executed on a first one of
9 said N call application nodes and is associated with a second trunk
10 idle list server application executed on a second one of said N
11 call application nodes separate from said first call application
12 node, said first and second trunk idle list server applications
13 thereby forming a load sharing group server application, wherein
14 said load sharing group server application receives a trunk line
15 allocation request from a call process being executed in said
16 switch and selects one of said first and second trunk idle list
17 server applications to allocate a trunk line to a call connection
18 associated with said trunk line allocation request according to a
19 load distribution algorithm.

1 2. The controller as set forth in Claim 1 wherein said first
2 trunk idle list server application allocates trunk lines from at
3 least one trunk group associated with said first trunk idle list
4 server application and said second trunk idle list server
5 application allocates trunk lines from at least one' trunk group
6 associated with said second trunk idle list server application.

1 3. The controller as set forth in Claim 2 wherein said load
2 distribution algorithm distributes new trunk line allocation
3 requests to said first and second trunk idle list server
4 applications according to a trunk group associated with said trunk
5 line allocation requests.

1 4. The controller as set forth in Claim 2 wherein said first
2 trunk idle server application comprises a first primary-backup
3 group server application, wherein said first primary-backup group
4 server application comprises a first primary trunk idle list server
5 application executed on said first call application node and a
6 first backup trunk idle list server application associated with
7 said first primary trunk idle list server application.

1 5. The controller as set forth in Claim 4 wherein trunk line
2 state information associated with said first primary trunk idle
3 list server application is mirrored to said first backup trunk idle
4 list server application associated with said first primary trunk
5 idle list server application.

1 6. The controller as set forth in Claim 5 wherein said first
2 backup trunk idle list server application resides on said first
3 call application node.

1 7. The controller as set forth in Claim 5 wherein said first
2 backup trunk idle list server application resides on a call
3 application node separate from said first call application node.

1 8. The controller as set forth in Claim 2 wherein said
2 second trunk idle list server application comprises a second
3 primary-backup group server application, wherein said second
4 primary-backup group server application comprises a second primary
5 trunk idle list server application executed on said second call
6 application node and a second backup trunk idle list server
7 application associated with said second primary trunk idle list
8 server application.

1 9. The controller as set forth in Claim 8 wherein state
2 information associated with said second primary call process is
3 mirrored to said second backup call process associated with said
4 second primary call process.

1 10. The controller as set forth in Claim 9 wherein said
2 second backup trunk idle list server application resides on said
3 second call application node.

1 11. The controller as set forth in Claim 10 wherein said
2 second backup trunk idle list server application resides on a call
3 application node separate from said second call application node.

1 12. A wireless network comprising:

2 a plurality of base stations capable of communicating
3 with a plurality of mobile stations in a coverage area of said
4 wireless network; and

5 a mobile switching center coupled to said plurality of
6 base stations and to a public switched telephone network by a
7 plurality of trunk lines, wherein said mobile switching center is
8 capable of handling call connections between calling devices and
9 called devices on said plurality of trunk lines, said mobile
10 switching center comprising:

11 a main processing unit capable of executing call
12 process client applications, wherein each of said call process
13 client applications is associated with one of said call
14 connections; and

15 a controller comprising N call application nodes
16 capable of executing a plurality of trunk idle list server
17 applications that allocate ones of said trunk lines to said
18 call connections, wherein a first trunk idle list server

19 application is executed on a first one of said N call
20 application nodes and is associated with a second trunk idle
21 list server application executed on a second one of said N
22 call application nodes separate from said first call
23 application node, said first and second trunk idle list server
24 applications thereby forming a load sharing group server
25 application, wherein said load sharing group server
26 application receives a trunk line allocation request from a
27 call process being executed in said switch and selects one of
28 said first and second trunk idle list server applications to
29 allocate a trunk line to a call connection associated with
30 said trunk line allocation request according to a load
31 distribution algorithm.

1 13. The wireless network as set forth in Claim 12 wherein
2 said first trunk idle list server application allocates trunk lines
3 from at least one trunk group associated with said first trunk idle
4 list server application and said second trunk idle list server
5 application allocates trunk lines from at least one trunk group
6 associated with said second trunk idle list server application.

1 14. The wireless network as set forth in Claim 13 wherein
2 said load distribution algorithm distributes new trunk line
3 allocation requests to said first and second trunk idle list server
4 applications according to a trunk group associated with said trunk
5 line allocation requests.

1 15. The wireless network as set forth in Claim 13 wherein
2 said first trunk idle server application comprises a first primary-
3 backup group server application, wherein said first primary-backup
4 group server application comprises a first primary trunk idle list
5 server application executed on said first call application node and
6 a first backup trunk idle list server application associated with
7 said first primary trunk idle list server application.

1 16. The wireless network as set forth in Claim 15 wherein
2 trunk line state information associated with said first primary
3 trunk idle list server application is mirrored to said first backup
4 trunk idle list server application associated with said first
5 primary trunk idle list server application.

1 17. The wireless network as set forth in Claim 16 wherein
2 said first backup trunk idle list server application resides on
3 said first call application node.

1 18. The wireless network as set forth in Claim 16 wherein
2 said first backup trunk idle list server application resides on a
3 call application node separate from said first call application
4 node.

1 19. The wireless network as set forth in Claim 13 wherein
2 said second trunk idle list server application comprises a second
3 primary-backup group server application, wherein said second
4 primary-backup group server application comprises a second primary
5 trunk idle list server application executed on said second call
6 application node and a second backup trunk idle list server
7 application associated with said second primary trunk idle list
8 server application.

1 20. The wireless network as set forth in Claim 19 wherein
2 state information associated with said second primary call process
3 is mirrored to said second backup call process associated with said
4 second primary call process.

1 21. The wireless network as set forth in Claim 20 wherein
2 said second backup trunk idle list server application resides on
3 said second call application node.

1 22. The wireless network as set forth in Claim 21 wherein
2 said second backup trunk idle list server application resides on a
3 call application node separate from said second call application
4 node.